



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAY 06 2016

OFFICE OF
AIR AND RADIATION

The Honorable Lamar Smith
Chairman
Committee on Science, Space and Technology
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Thank you for your April 6, 2016, letter to U.S. Environmental Protection Agency Administrator Gina McCarthy regarding oversight of the EPA's Regional Haze regulations. The Administrator asked that I respond on her behalf. This letter is an initial response.

Regional haze is an important air pollution issue that Congress established clear goals for in the 1990 Clean Air Act Amendments, recognizing the tremendous significance of the nation's wilderness areas to our economy, our public welfare, and our national identity. In 2015, there were more than 307 million recreation visitors to our nation's most treasured parks and wilderness areas. Unfortunately, many visitors aren't able to see the spectacular vistas they expect. The Clean Air Act requires the EPA to work with states to reduce the regional haze that affects visibility in 156 national parks and wilderness areas, including the Grand Canyon, Yosemite, the Great Smoky Mountains, and Shenandoah National Parks. During much of the year in these areas, a veil of white or brown haze hangs in the air blurring the view. Most of this haze is not natural. It is air pollution, carried by the wind often many hundreds of miles from where it originated. Haze is caused when sunlight encounters tiny pollution particles in the air. Some light is absorbed by particles. Other light is scattered away before it reaches an observer. Air pollutants come from a variety of natural and manmade sources. Manmade sources can include motor vehicles, electric utility and industrial fuel burning, and manufacturing operations. Particle pollution is the major cause of reduced visibility (haze) in parts of the United States, including many of our national parks.

Under the regional haze provisions of the Clean Air Act, the states and tribes, in coordination with the EPA, the National Park Service, the U.S. Fish and Wildlife Service, the U.S. Forest Service, and others, develop and implement air quality protection plans to reduce the pollution that causes visibility impairment. State and local air quality agencies have put together a first set of plans to reduce regional haze in national parks and wilderness areas, most of which are now being implemented. A second set of plans will focus on improving visibility through the year 2028. There will be a new set of plans every ten years, each aimed at taking further steps towards meeting the national goal of eliminating the manmade pollution that impairs visibility. These plans require technically feasible controls at sources determined to be contributing to haze. Each

of these actions is made available for public comment, including on the underlying analysis of the cost of certain control technologies. As always, the EPA strives to use the best available science and information when taking these regulatory actions and others under the Clean Air Act, which are also subject to judicial review.

Your letter requested various categories of information, including documents and communications referring or relating to the EPA's use of Dr. Phyllis Fox as a consultant on certain regional haze issues. The EPA is working diligently to identify and collect responsive materials and will make further appropriate productions as expeditiously as possible. We are, however, able to enclose with this letter an initial set of documents.

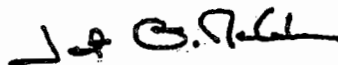
Please note that portions of your request call for internal deliberations of an Executive Branch agency, the EPA, and, as such, raise a confidentiality interest. In order to identify specific documents in which the EPA has a confidentiality interest, we have added a watermark to these documents that reads "Internal Deliberative Document of the U.S. Environmental Protection Agency; Disclosure Authorized Only to Congress for Oversight Purposes." Through this accommodation, the EPA does not waive any confidentiality interests in these documents or similar documents in other circumstances. The EPA respectfully requests that the Committee and staff protect the documents and the information contained in them from further dissemination. Should the Committee determine that its legislative mandate requires further distribution of this confidential information outside the Committee, we request that such need first be discussed with the agency to help ensure the Executive Branch's confidentiality interests are protected to the fullest extent possible.

You will notice that some of the documents contain redactions of confidential business information, non-responsive, or non-substantive material, such as personal privacy information. We redacted this information in a manner that does not obscure the identity of any EPA employees involved in the relevant communications.

The EPA recognizes the importance of the Committee's need to obtain information necessary to perform its legitimate oversight functions, and is committed to continuing to work with your staff on how best to accommodate the Committee's interests in the documents requested in your letter.

Please feel free to contact me if you have any questions, or your staff may contact Tom Dickerson in the EPA's Office of Congressional and Intergovernmental Relations at dickerson.tom@epa.gov or (202) 564-3638.

Sincerely,

A handwritten signature in black ink, appearing to read "Janet G. McCabe", with a stylized flourish at the end.

Janet G. McCabe
Acting Assistant Administrator

Enclosures

cc: The Honorable Eddie Bernice Johnson
Ranking Member



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAY 20 2016

OFFICE OF
CONGRESSIONAL AND
INTERGOVERNMENTAL
RELATIONS

The Honorable Lamar Smith
Chairman
Committee on Science, Space and Technology
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

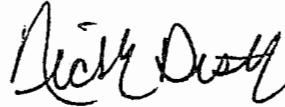
I am writing today to supplement the U.S. Environmental Protection Agency's response of May 6, 2016, to your letter of April 6, 2016, regarding the EPA's Regional Haze regulations. Enclosed with this letter is a set of documents responsive to your request.

As noted in our previous letter on this topic, we have determined pursuant to EPA regulations at 40 C.F.R. § 2.209(b) that some of the requested information may be claimed or considered to be confidential business information (CBI) by the submitter. We have also informed the affected business of the disclosure of this information to you in accordance with 40 C.F.R. § 2.209(b)(2).

The EPA respectfully requests that you treat the information as confidential and that you not publicly disclose the contents of the information to which the EPA is granting you access. The limited disclosure of this information is authorized by law and does not constitute a waiver of any confidentiality claims. In order to identify specific documents in which the EPA and its contractors have a confidentiality interest, we have added a watermark to these documents that reads "Document May Include Confidential Business Information; Disclosure Authorized Only to Congress for Oversight Purposes." Should the Committee determine that its legislative mandate requires further distribution of this confidential information outside the Committee, we request that such need first be discussed with the agency to help ensure the Executive Branch's confidentiality interests are protected to the fullest extent possible.

If you have further questions, please contact me, or your staff may contact Kyle Aarons in my office at aarons.kyle@epa.gov or (202) 564-7351.

Sincerely,

A handwritten signature in black ink, appearing to read "Nichole Distefano". The signature is fluid and cursive, with the first name "Nichole" and last name "Distefano" clearly distinguishable.

Nichole Distefano
Associate Administrator

Enclosures

cc: The Honorable Eddie Bernice Johnson
Ranking Member



3040 Cornwallis Road • PO Box 12194 • Research Triangle Park, NC 27709-2194 • USA
Telephone 919.541.6000 • Fax 919.541.6000 • www.rti.org

July 28, 2010

US EPA
RTP Procurement Operations Division
Mail Code: E105-02
Research Triangle Park, NC 27711

ATTENTION: Karen Watson
Contract Specialist

REFERENCE: Contract No. EP-D-06-003; Work Assignment No. 4-85

Dear Ms. Watson:

RTI has proposed [redacted] as a consultant in support of Work Assignment 4-85 under the above referenced contract.

In accordance with FAR Clause 52.244-2, Subcontracts, this letter provides EPA notice of RTI's issuance of a consultant agreement under the above referenced contract. Based on our purchasing system approval, we understand consent is not required and therefore, this letter serves as notification of our intent to issue the following subcontract:

- (1) Description of the services to be subcontracted

[redacted]

- (2) Identification of the type of subcontract to be used

RTI anticipated issuing a time-and-materials subcontract

[redacted]

- (3) Identification of the proposed subcontractor

[redacted]

- (4) The proposed subcontract price

[redacted]

Should you have any questions, please do not hesitate to contact me at [redacted] or via electronic mail at [redacted]

Sincerely,

Donna Cooper

Donna N. Cooper
Senior Contract Specialist

cc: Jolynn Collins
EPA Project Officer

Rebert



3040 Cornwallis Road • PO Box 12194 • Research Triangle Park, NC 27709-2194 • USA
Telephone 919.541.6000 • Fax 919.541.5985 • www.rti.org

November 12, 2010

US EPA
RTP Procurement Operations Division
Mail Code: E105-02
Research Triangle Park, NC 27711

ATTENTION: Karen Watson
Contract Specialist

REFERENCE: Contract No. EP-D-06-003; Work Assignment No. 4-90

Dear Ms. Watson:

RTI is [redacted] consultant in support of Work Assignment 4-90 under the above referenced contract. Please note I have enclosed [redacted]

In accordance with FAR Clause 52.244-2, Subcontracts, this letter provides EPA notice of RTI's intent to [redacted]

(1) Description of the services to be subcontracted

[redacted]

(2) Identification of the type of subcontract to be used
RTI anticipates issuing a time-and-materials amendment [redacted]

(3) Identification of the proposed subcontractor

[redacted]

(4) The proposed subcontract price

[redacted]

Should you have any questions, please do not hesitate to contact me at [redacted] or via electronic mail at [redacted]

Sincerely,

Donna Cooper

Donna N. Cooper
Senior Contract Specialist

cc: Jolynn Collins
EPA Project Officer

CBI

CERTIFICATION CONCERNING CONFLICTS OF INTEREST

**EPA Contract No. EP-D-06-003
"Economic Analyses and Control Strategy Development
for Air Pollution Control Regulations"**

CONSULTANT

JUN 04 2010

WORK ASSIGNMENT ENVIRONMENTAL PROTECTION AGENCY Research Triangle Park, NC 27711		EPA CONTRACT NUMBER EP-D-06-003	
		CONTRACTOR RTI	
		ASSIGNMENT NUMBER 4-85	
		ASSIGNMENT CHANGE NUMBER	
TITLE: EPA Region 6 Regional Haze BART Cost Analysis		EFFECTIVE DATE 6/4/10	
Project Officer: Nancy D. Riley, 919-541-5353, MD-C404-02 Work Assignment Manager: Ellen Belk Statement of Work: See attached statement of work			
		SOW REFERENCE: Sections 2, 3, 8, 14, and 19	
ESTIMATE OF		GOVERNMENT ESTIMATE	
LABOR HOURS		459 hours	
DURATION OF WORK		5 months	
COMPLETION DATE		October 31, 2010	
WORK ASSIGNMENT MANAGER: Ellen Belk <i>Ellen Belk</i> 5/17/2010		ORG CODE R6/MPPD	TELEPHONE 214-665-2164
		DATE 5/3/10	
APPROVALS (as applicable)		SIGNATURE	DATE
Section Chief		Guy Donaldson <i>Guy Donaldson</i>	5/3/10
PROJECT OFFICER		Nancy D. Riley <i>Nancy D. Riley</i>	5/4/10
CONTRACTING OFFICER		Karen C. Watson <i>Karen C. Watson</i>	6/4/10
CONTRACTOR'S ACKNOWLEDGEMENT OF RECEIPT			

I. TITLE: Regional Haze BART Control Cost Evaluation

II. WORK ASSIGNMENT MANAGER (WAM):

Ellen Belk
U.S. Environmental Protection Agency
Office: EPA Region 6, Multi-media Planning and Permitting Division
Division (Mail Code): 6PD
Dallas, TX 75202-2733
Phone: 214-665-7186
Email: belk.ellen@epa.gov

III. LEVEL OF EFFORT:

Hours: 459
Duration: 5 Months

IV. BACKGROUND:

This work is concerned with cost analyses to support air pollution controls that may be required as part of the Oklahoma and New Mexico regional haze state implementation plans. Cost estimates will be developed for the installation and operation of Dry Flue Gas Desulfurization (DFGD) scrubbers at six units of three coal-fired power plants in Oklahoma. These units are the Oklahoma Gas and electric (OG&E) Muskogee Nos. 4 and 5, and Sooner Nos. 1 and 2; and the American Electric Power's Public Service Company of Oklahoma (AEP/PSO) Northeastern Nos. 3 and 4. Cost estimates will also be developed for the installation and operation of Selective Catalytic Reduction (SCR) at Units 1, 2, 3, and 4 of the San Juan Generating Station in New Mexico.

V. STATEMENT OF WORK (SOW):

The WAM is authorized to provide technical direction in accordance with the contract. The Contractor shall perform the following tasks:

Task 1: Work Plan

The Contractor shall develop a work plan. The Contractor shall provide a cost estimate for each task separately. **The Contractor shall not proceed with other tasks until EPA approves the work plan.** The Contractor shall hold conference calls with the WAM on at least a biweekly basis after approval of the work plan to plan and review progress of this WA.

Deliverables under Task 1:

Work Plan shall be delivered within 20 days of effective date of WA.

Task 2: Oklahoma BART DFGD Cost Estimate

The Contractor shall develop a work plan for the development of cost estimates for the installation and operation of Dry Flue Gas Desulfurization (DFGD) scrubbers at six units of three coal-fired power plants in Oklahoma. These units are the Oklahoma Gas and Electric (OG&E) Muskogee Nos. 4 and 5, and Sooner Nos. 1 and 2; and the American Electric Power's Public Service Company of Oklahoma (AEP/PSO) Northeastern Nos. 3 and 4. These cost estimates shall include all labor, materials, engineering, and associated items necessary for the installation and operation of these scrubbers. The Contractor shall use OG&E's detailed cost estimate, EPA Region 6's cost analysis, and information OG&E will supply as Confidential Business Information (CBI) as references. [This information will be provided after effective date of WA.] The subject CBI is being furnished to the Contractor by EPA under 40 CFR § 2.301(h). In using the CBI information referenced above, the Contractor shall adhere to the following provisions:

- A. The Contractor and the Contractor's staff shall use the information only for the purpose of carrying out the work required by the contract, shall refrain from disclosing the information to anyone other than EPA without the prior written approval of each affected business or of an EPA legal office and shall return to EPA all copies of the information (and any abstracts or extracts therefrom) upon request by the EPA program office, whenever the information is no longer required by the Contractor for the performance of the work required under the contract, or upon completion of the contract (where the information was provided to the Contractor by an agency other than EPA, the contractor may disclose or return the information to that agency);
- B. The Contractor shall obtain a written agreement to honor such terms of the contract from each of the Contractor's staff who will have access to the information, before such staff is allowed such access;
- C. The Contractor acknowledges and agrees that the contract provisions concerning the use and disclosure of business information are included for the benefit of, and shall be enforceable by, both the United States government and any affected business having an interest in information concerning it supplied to the contractor or subcontractor by the United States government under the contract or subcontract; and
- D. In accordance with 40 C.F.R. § 2.211(d), the Contractor, and all Contractor staff, shall use or disclose the business information furnished by EPA under 40 C.F.R. § 2.301(h) only as permitted by the contract under which the information was furnished. The Contractor shall take steps to properly safeguard the business information including following any security procedures for handling and safeguarding business

information which are contained in the SOW, the EPA CBI manual, and the corresponding regulations. Any violation of 40 C.F.R. § 2.211(d) shall constitute grounds for suspension or debarment of the Contractor. A willful violation of 40 C.F.R. § 2.211(d) may result in criminal prosecution.

The Contractor shall, to the extent possible, maximize the use of these and other possible sources of information, and the inherent similarity of these coal fired units, in the development of these cost estimates. The Contractor shall prepare these cost estimates to a quality necessary for EPA regulatory support and possible litigation challenges.

The deliverable shall be a detailed cost estimate in the form of a spreadsheet with the costs separated into capital costs, labor, operating costs, and financial costs. An accompanying explanative document shall be supplied.

Deliverables under Task 2:

- Review of adequacy of EPA supplied data and assessment of the need for additional vendor quotes. WAM will have 7 days to review and comment on this deliverable prior to Contractor proceeding on the remainder of Task 2.
- Final product 4 weeks from work plan approval date. WAM will review and provide comments within 7 days.
- Final work product within 7 days following receipt of WAM's comments on draft.

Task 3: New Mexico BART SCR cost estimate

The Contractor shall develop a detailed cost estimates for the installation and operation of Selective Catalytic Reduction (SCR) at Units 1, 2, 3, and 4 of the San Juan Generating Station in New Mexico. These cost estimates shall include all labor, materials, engineering, and associated items necessary for the installation and operation of these scrubbers. The Contractor shall use all materials developed and acquired by the New Mexico Environment Department relating to this cost analyses. The Contractor shall, to the extent possible, maximize the use of these and other possible sources of information, and the inherent similarity of these coal fired units, in the development of these cost estimates. The Contractor shall prepare these cost estimates to a quality necessary for EPA regulatory support and possible litigation challenges.

The deliverable shall be a detailed cost estimate in the form of a spreadsheet with the costs separated into capital costs, labor, operating costs, and financial costs. An accompanying explanative document shall be supplied.

Deliverables under Task 3:

- Outline of approach for WAM review 2 weeks from approval of work plan. WAM will review and provide comments within 7 work days.

- Review of adequacy of EPA and State of New Mexico supplied data and assessment of the need for additional vendor quotes. WAM will have 7 days to review and comment on this deliverable prior to Contractor proceeding on the remainder of Task 3.
- Draft final product 8 weeks from approval of work plan. WAM will review and provide comments within 7 days.
- Final work product within 7 days following receipt of WAM comments on draft.

Task 4: BART litigation support

The Contractor shall not proceed with Task 4 until authorized by the WAM. The Contractor shall provide cost analyses for hourly charges, travel expenses, and associated charges necessary for the Contractor to function as the Government's expert witness in a court of law in support of Task Nos. 2 and 3, above. In so doing, the Contractor shall assume one senior level person is needed for seven, eight hour days. The Contractor shall assume this court of law is the United States Court of Appeals for the 19th Circuit, located in Denver, Colorado.

Deliverables under Task 4:

- Outline of approach for WAM review 2 weeks from approval of work plan. WAM will review and provide comments within 7 work days.
- Final product shall be delivered according to the schedule set by the court of law.

VI. REPORTING REQUIREMENTS:

All reports shall be in accordance with contract specifications. The Contractor shall provide monthly progress reports in accordance with the terms of the contract. The Contractor shall submit work products in electronic as well as hard copy form. In addition, the Contractor shall deliver to the WAM each draft and final report in electronic format that is readable by windows-based word-processing (Microsoft Word 2003), graphics (Microsoft PowerPoint 2003), spreadsheet (Excel 2003), and database (Access 2003) programs. The Contractor shall also provide electronic copies of reports in PDF format.

NOTE: If the contractor does not have a current copy of the document referenced on the following page, the Contractor shall notify the EPA project officer immediately so a current copy of the CAA CBI Security Manual can be forwarded.

EPA 450/B-03-001
March 2003

Clean Air Act Confidential Business Information Security Manual

**U.S. Environmental Protection Agency
Region 5, Library (PL-12J)
77 West Jackson Boulevard, 12th Floor
Chicago, IL 60604-3590**

**U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Program Resources and Regional Management Staff
Research Triangle Park, North Carolina**

EPA Region 6 Regional Haze BART Cost Analysis
EPA Contract Number EP-D-06-003
Work Assignment 4-85

Task-Specific Cost Estimate Assumptions

Work Assignment (WA) 4-85 under EPA Contract Number EP-D-06-003 was issued on June 4, 2010, to RTI International (RTI) to assist EPA Region 6 with the review and preparation of cost analyses to support air pollution controls that may be required as part of the States of Oklahoma and New Mexico regional haze state implementation plans. Because RTI does not have in-house staff with the expertise and qualifications of a "national expert" on the costing of air pollution controls retrofitted to existing coal-fired electric utility power plants, it is necessary for RTI to subcontract the majority of technical work required to complete the WA to an outside consultant who is experienced with site-specific cost estimation of air pollution controls retrofitted to existing facilities, and who is qualified to serve as the Government's expert witness in a court of law should EPA need such support. The specific assumptions used by RTI for preparing its cost estimate for each of the WA tasks are described below.

Task I. Work Plan (and WA Administration)

The cost estimate for Task I is based on labor hours and expenditures that RTI has spent to date for the following activities: 1) telephone calls between RTI and the EPA Work Assignment Manager (WAM) and Region 6 staff to help them with obtaining the required expertise needed for the WA technical tasks; 2) identifying and obtaining the services of a qualified national expert to serve as a consultant to RTI to perform the technical work required for the WA; 3) working with knowledgeable EPA and RTI Confidential Business Information (CBI) document control staff to ensure that the use of CBI required for the project by the RTI consultant will be conducted in compliance with all EPA CBI security requirements; 4) preparing and submitting to EPA a draft WA Work Plan; and 5) preparing and submitting to EPA the follow-up, task-specific cost estimate for the WA requested by EPA. Costs for Task I also include the future administrative costs associated with preparing the monthly progress and financial reports required under EPA Contract Number EP-D-06-003 through the end of the WA performance period of October 31, 2010.

Task 2. Oklahoma BART DFGD Cost Estimate

The cost estimate for Task 2 is for the preparation of a detailed control cost estimate for the retrofit installation and operation of Dry Flue Gas Desulfurization (DFGD) scrubber systems for control of sulfur dioxide (SO_2) emissions from three existing coal-fired power plants located in Oklahoma. The majority of work required to complete Task 2 will be performed by the RTI consultant. A small number of additional hours are included for RTI technical staff to assist the RTI consultant in preparing the cost estimate and to review the required draft and final WA deliverables prepared by the consultant before delivery to EPA. The deliverable to EPA for Task 2 will be a cost estimate spreadsheet with an accompanying explanatory document. A draft version of the cost estimate will be delivered to the EPA WAM for EPA review and comment. A final version of cost estimate will be prepared and delivered to EPA incorporating revisions needed to respond to the comments provided by EPA.

To facilitate the expeditious and most cost-effective use of the CBI required to complete Task 2, it is recommended that applicable CBI be transferred from the EPA Region 6 office to the Region 9 office in San Francisco, CA. The RTI consultant is located in the San Francisco area and can readily travel the short distance to the Region 9 office and return multiple times to use the CBI if the need arises. In the event that the CBI data cannot be transferred to the EPA Region 9 office, for the purpose of costing Task 2, the costs include a one-time trip for the RTI consultant to travel from San Francisco to the EPA Region 6 office in Dallas, TX, to use the CBI.

Task 3. New Mexico BART SCR Cost Estimate

The cost estimate for Task 3 is for the preparation of a detailed cost estimate for the retrofit installation and operation of a Selective Catalytic Reduction (SCR) system for control of nitrogen oxides (NO_x) emissions from an existing coal-fired power plant located in New Mexico. The majority of work required to complete Task 3 will be performed by the RTI consultant. A small number of additional hours are included for RTI technical staff to assist the RTI consultant in preparing the cost estimate and to review the required draft and final WA deliverables prepared by the consultant before delivery to EPA. The deliverable to EPA for Task 3 will be a cost estimate spreadsheet with an accompanying explanatory document. A draft version of the cost estimate will be delivered to the EPA WAM for EPA review and comment. A final version of

cost estimate will be prepared and delivered to EPA incorporating revisions needed to respond to the comments provided by EPA.

Task 4. BART Litigation Support

The cost estimate for Task 4 is for the RTI consultant to serve, as needed, as the Government's expert witness in a court of law in support of the cost analyses prepared for Tasks 2 and 3. The cost estimate for this task is based on the assumptions listed by EPA for Task 4 under the Statement of Work in WA Section V. For the purpose of costing Task 4, it is assumed that the expert witness (i.e., the RTI consultant) will travel from San Francisco to the United States Court of Appeals for the 9th Circuit, located in Denver, CO, and the consultant's service as an expert witness is needed for seven, 8-hour days.

Statement of Work

I. Title: Region 8 North Dakota Regional Haze FIP
Contractor Name: RTI
Contract #: EP-D-06-003
WA #: 4-90

II. Work Assignment Manager (WAM):

WAM Name: Carl Daly
U.S. Environmental Protection Agency
Region 8
Air Permitting, Monitoring, and Modeling Unit, Unit Chief,
Daly.Carl@epa.gov, 303-312-6416

III. Scope:

U.S. Environmental Protection Agency (EPA) Region 8 requires environmental engineering consulting support services for development of a FIP for a portion of North Dakota's Regional Haze State Implementation Plan (SIP) which did not adequately address federal regulatory requirements. The contractor shall develop a cost estimate for selective catalytic reduction (SCR) nitrogen oxides (NO_x) controls on one electric generating unit (EGU), the Unit 2 boiler, located at Basin Electric's Leland Olds Station.

The work will be conducted by using existing documentation from the North Dakota Department of Health (NDDH), Basin Electric's Best Available Retrofit Technology (BART) determination, and EPA (primarily in the form of comment letters) in addition to readily available reference materials. The contractor is responsible to obtain the North Dakota Regional Haze SIP for use as necessary from the NDDH website. EPA will furnish, upon request, any existing documentation submitted with the North Dakota Regional Haze SIP. Technical review and recommendations shall conform to the Regional Haze Rule (64 FR 35714, July 1, 1999) and the BART Guidelines (70 FR 39104, July 6, 2005). Cost analyses should be performed using the methodologies described in the "EPA Air Pollution Control Cost Manual", Sixth ed., EPA-452-02-001, January 2002 (Control Cost Manual).

IV. Description of Services:

The Contractor shall utilize existing cost information for Leland Olds Station, Unit 2 prepared by Basin Electric and NDDH as a starting point to evaluate the costs associated with NO_x control technologies. Some general information regarding Leland Olds is presented in Table 1. EPA prepared a cost analysis as part of commenting on North Dakota's Best Available Control Technology (BACT) determination for two similar lignite coal-fired EGU's at Minnkota's Milton R. Young Station (MRYS). The WAM will provide the EPA comment letter and cost analysis for MRYS. The contractor shall consider the following technologies in the analysis:

- Low dust SCR + ASOFA
- Tail end SCR + ASOFA

The Contractor shall use the methodologies described in the Control Cost Manual. The Contractor shall take into consideration EPA's past comments on Basin Electric's cost analysis for tail end SCR, provided by the WAM. Examples of areas that, as a minimum, should be addressed include:

- Reagent injection rates (both urea and anhydrous ammonia)
- Reagent slip
- Economic volatility of re-heat fuel
- Required catalyst volume
- Catalyst life expectancy

The Contractor shall base indirect costs and contingencies on realistic operating scenarios and the Control Cost Manual guidelines.

Existing emissions data that is used in the cost analysis is considered "secondary data" for quality assurance purposes and requires the contractor to provide a basic Quality Assurance Project Plan (QAPP). The format for the QAPP is provided as Enclosure (1).

Table 1
Leland Olds Station Unit 2

Source	Owner	Unit	Type	Capacity
Leland Olds Station	Basin Electric Power Coop.	2	EGU	440 MWe

V. Deliverables:

One contractor report shall be provided as described under Project Schedule below. The report shall include a description of the methodologies and assumptions used as well as detailed contractor cost calculations in Microsoft Excel spreadsheets. The report shall also include a QAPP as detailed under the Description of Services. The report shall also include a list of any reference materials used. One electronic copy of the report is required and may be provided either on compact diskette or by email to the EPA North Dakota Regional Haze Program Manager.

VI. Project Schedule:

The contractor shall provide a draft report within 15 business days after the work assignment is issued. EPA review of the draft report will be conducted within 10 business days of receipt. The contractor shall incorporate EPA comments and generate the final report within 5 business days of receiving comments.

VII. EPA Building Hours:

While it is anticipated that most of the work required in this project will be conducted at the consultant's place of business, EPA offices, located at 1595 Wynkoop Street, Denver, CO 80202-1129, are available for meetings and the use of the technical library. Building hours are Monday through Friday 6:00 a.m. - 6:00 p.m. excluding Federal holidays.



3040 Cornwallis Road • PO Box 12194 • Research Triangle Park, NC 27709-2194 • USA
Telephone 919.541.6000 • Fax 919.541.5985 • www.rti.org

March 21, 2012

US EPA
RTP Procurement Operations Division
Mail Code: E105-02
Research Triangle Park, NC 27711

ATTENTION: Natalia Fisher-Jackson
Contracting Officer

REFERENCE: Contract No. EP-W-11-029; Work Assignment No. 0-21

Dear Ms. Fisher-Jackson:

Enclosed please find RTI's cost estimate prepared in response to Amendment No. 2 to Work Assignment 0-21 entitled, "North Dakota Regional Haze Federal Implementation Plan Support."

Should you need any additional information, please do not hesitate to contact the undersigned at [redacted] or via electronic mail at [redacted]. Matters of a technical nature can be addressed to Mr. George Van Houtven at (919) 541-7150 or via electronic mail at [redacted].

Sincerely,

Donna N. Cooper
Senior Contract Negotiator

Enclosures: A/S

cc: Jolynn Collins
EPA Project Officer

Gail Fallon
EPA Work Assignment Manager

CBI

Staffing Plan by Task and Labor Category



3040 Cornwallis Road • PO Box 12194 • Research Triangle Park, NC 27709-2194 • USA
Telephone: 919.541.6000 • Fax 919.541.5985 • www.rti.org

December 7, 2011

US EPA
RTP Procurement Operations Division
Mail Code: E105-02
Research Triangle Park, NC 27711

ATTENTION: Natalia Fisher-Jackson
Contracting Officer

REFERENCE: Contract No. EP-W-11-029, Work Assignment No. 0-21

Dear Ms. Fisher-Jackson:

Enclosed please find RTI's cost estimate and work plan prepared in response to Work Assignment 0-21 entitled, "North Dakota Regional Haze Federal Implementation Plan Support."

Should you need any additional information, please do not hesitate to contact the undersigned at [redacted] or via electronic mail at [redacted]. Matters of a technical nature can be addressed to Mr. George Van Houtven at (919) 541-7150 or via electronic mail at [redacted].

Sincerely,

Donna Cooper
Donna N. Cooper
Senior Contract Negotiator

Enclosures: A/S

cc: Jolynn Collins
EPA Project Officer

Gail Fallon
EPA Work Assignment Manager

CERTIFICATION CONCERNING CONFLICTS OF INTEREST

**EPA Contract No. EP-W-011-029
"Economic Analysis and Control Strategy Development for
Air Pollution Control Regulations"**

WORK ASSIGNMENT NO: 0-21

CONTRACTOR: RTI

ORGANIZATIONAL CONFLICTS OF INTEREST:

To the best of your knowledge and belief, no actual or potential organizational conflicts of interest exist.

Signature:

Date:

Donna Cooper

12/07/11

OR

To the best of your knowledge and belief, all actual or potential organizational conflicts of interest have been reported to the EPA Contracting Officer. Please attach a letter detailing the Conflicts of Interest.

Signature:

Date:

PERSONNEL CONFLICTS OF INTEREST:

This is to certify that personnel who perform work under the task order or relating to the task order have been informed of their obligation to report personal and organizational conflicts of interests to you. Attach a letter detailing any personnel conflicts of interest, if applicable.

Signature:

Date:

Donna Cooper

12/07/11

FUTURE CONFLICTS OF INTEREST:

This is to certify that you will promptly report to EPA any organizational or personnel conflicts of interest that may arise during the performance of this task order.

Signature:

Date:

Donna Cooper

12/07/11

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pages are CBI

**North Dakota Regional Federal
Implementation Plan Support: Response to
Comments**

Work Assignment 0-21

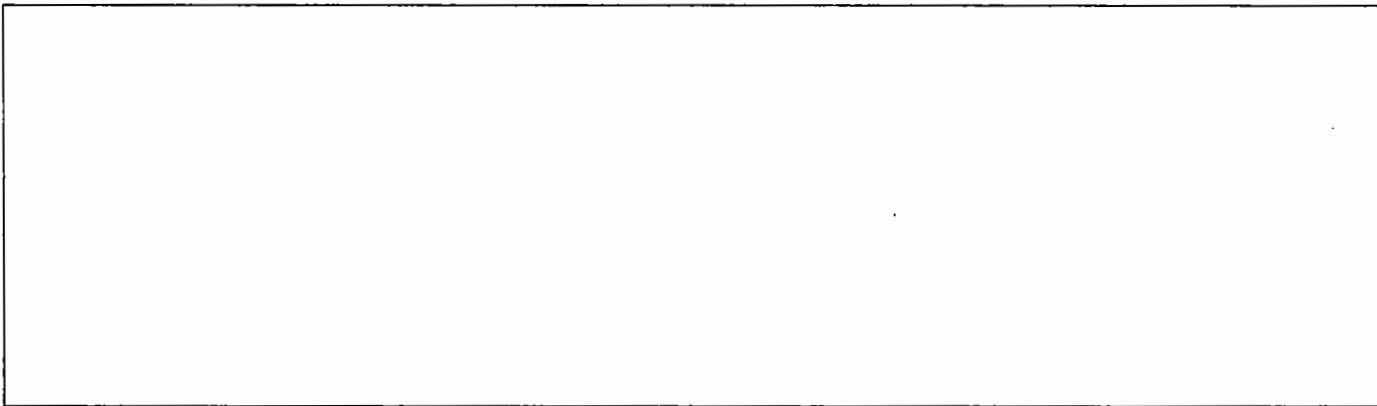
Work Plan

1. STATEMENT OF WORK (SOW)

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3. PROJECT SCHEDULE

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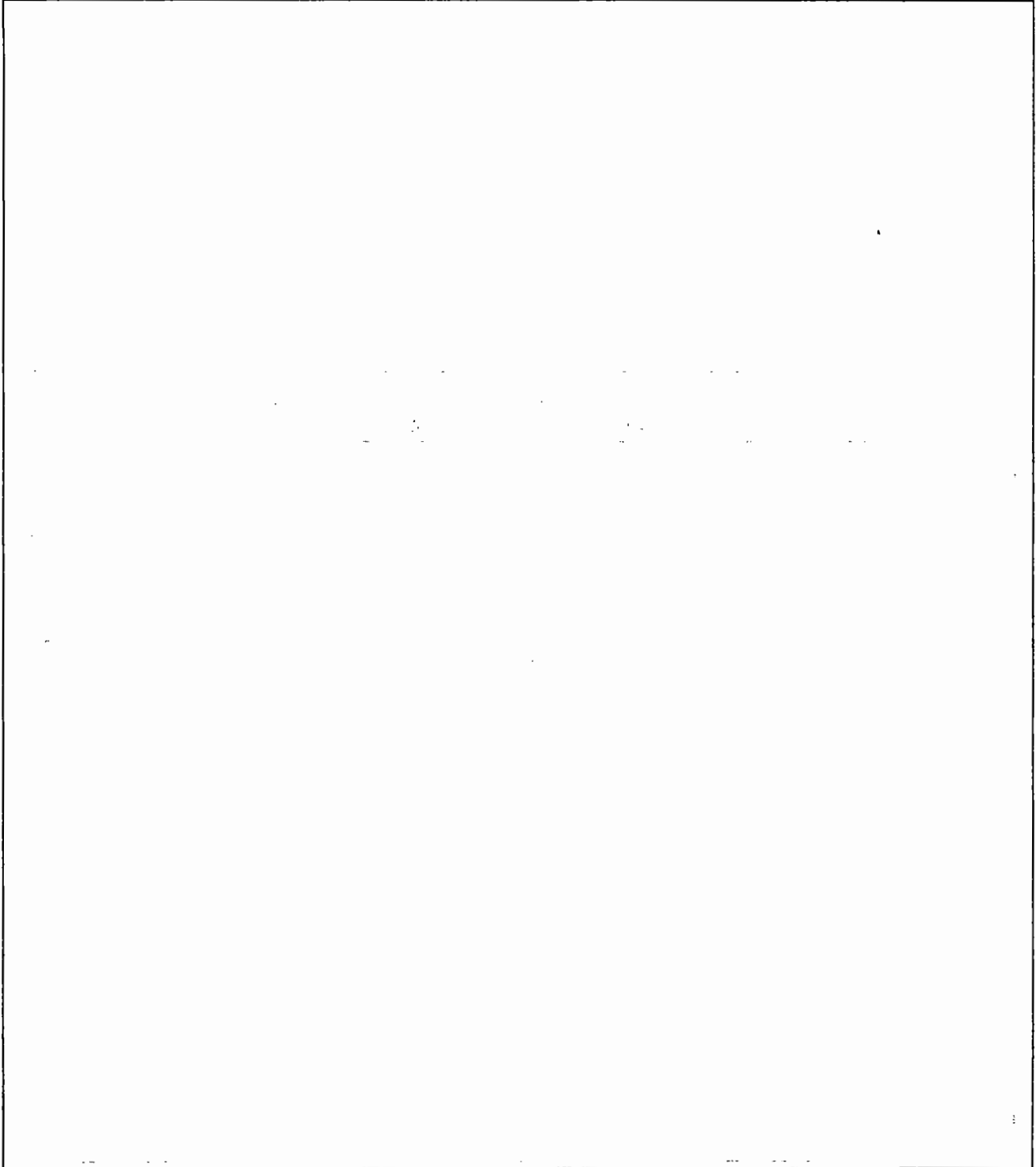
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Table 2. Staffing Plan by Task and Labor Category

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8. CUMULATIVE ESTIMATED COSTS AND LABOR-HOURS

**Statement of Work
North Dakota Regional Haze
Federal Implementation Plan (FIP) Support
Response to Public Comments**







Table 1
Leland Olds Station Unit 2



EPA Points of Contact:



3040 Cornwallis Road ■ PO Box 12194 ■ Research Triangle Park, NC 27709-2194 ■ USA
Telephone 919.541.6000 ■ Fax 919.541.5985 ■ www.rti.org

October 6, 2011

US EPA
RTP Procurement Operations Division
Mail Code: E105-02
Research Triangle Park, NC 27711

ATTENTION: Natalia Fisher-Jackson
Contract Specialist

REFERENCE: Contract No. EP-W-11-029; Work Assignment No. 0-15

Dear Ms. Fisher-Jackson:

RTI is proposing [redacted] as a consultant in support of Work Assignment 0-15 under the above referenced contract. Please note [redacted] Certification concerning Conflicts of Interest form was submitted as part of our work plan submission on September 26th.

In accordance with FAR Clause 52.244-2, Subcontracts, this letter provides EPA notice of RTI's intent to issue a consulting agreement under the above referenced contract. Based on our purchasing system approval, we understand consent is not required and therefore, this letter serves as notification of our intent to issue the following subcontract:

- (1) Description of the services to be subcontracted

[redacted]

- (2) Identification of the type of subcontract to be used

RTI anticipates issuing a time-and-materials agreement

[redacted]

- (3) Identification of the proposed subcontractor

[redacted]

- (4) The proposed subcontract price

[redacted]

Should you have any questions, please do not hesitate to contact me at [redacted] or via electronic mail at [redacted]

Sincerely,

Donna Cooper

Donna N. Cooper
Senior Contract Negotiator

cc: Jolynn Collins
EPA Project Officer



3040 Cornwallis Road • PO Box 12194 • Research Triangle Park, NC 27709-2194 • USA
Telephone 919.541.6000 • Fax 919.541.5985 • www.rti.org

July 8, 2010

US EPA
RTP Procurement Operations Division
Mail Code: E105-02
Research Triangle Park, NC 27711

ATTENTION: Karen Watson
Contract Specialist

REFERENCE: Contract No. EP-D-06-003; Work Assignment No. 4-85

Dear Ms. Watson:

Enclosed please find RTI's cost estimate and work plan prepared in response to Work Assignment 4-85 entitled, "EPA Region 6 Regional Haze BART Cost Analysis."

Please note we have included a signed Conflict of Interest certification [redacted]

[redacted] RTI will be submitting consent for [redacted]
under separate cover.

Should you need any additional information, please do not hesitate to contact the undersigned at [redacted]
[redacted] or via electronic mail at [redacted]

Sincerely,

Donna Cooper
Donna N. Cooper
Senior Contract Specialist

Enclosures: A/S

cc: Jolynn Collins
EPA Project Officer

Ellen Beik
EPA Work Assignment Manager

CERTIFICATION CONCERNING CONFLICTS OF INTEREST

**EPA Contract No. EP-D-06-003
"Economic Analyses and Control Strategy Development
for Air Pollution Control Regulations"**

WORK ASSIGNMENT NO: 485

CONTRACTOR: RTI

ORGANIZATIONAL CONFLICTS OF INTEREST:

To the best of your knowledge and belief, no actual or potential organizational conflicts of interest exist.

Signature:

Date:

Donna Coogan

07/08/10

OR

To the best of your knowledge and belief, all actual or potential organizational conflicts of interest have been reported to the EPA Contracting Officer. Please attach a letter detailing the Conflicts of Interest.

Signature:

Date:

PERSONNEL CONFLICTS OF INTEREST:

This is to certify that personnel who perform work under the task order or relating to the task order have been informed of their obligation to report personal and organizational conflicts of interests to you. Attach a letter detailing any personnel conflicts of interest, if applicable.

Signature:

Date:

Donna Coogan

07/08/10

FUTURE CONFLICTS OF INTEREST:

This is to certify that you will promptly report to EPA any organizational or personnel conflicts of interest that may arise during the performance of this task order.

Signature:

Date:

Donna Coogan

07/08/10

CBI

CERTIFICATION CONCERNING CONFLICTS OF INTEREST

**EPA Contract No. EP-D-06-003
"Economic Analyses and Control Strategy Development
for Air Pollution Control Regulations"**

	CONSULTANT	

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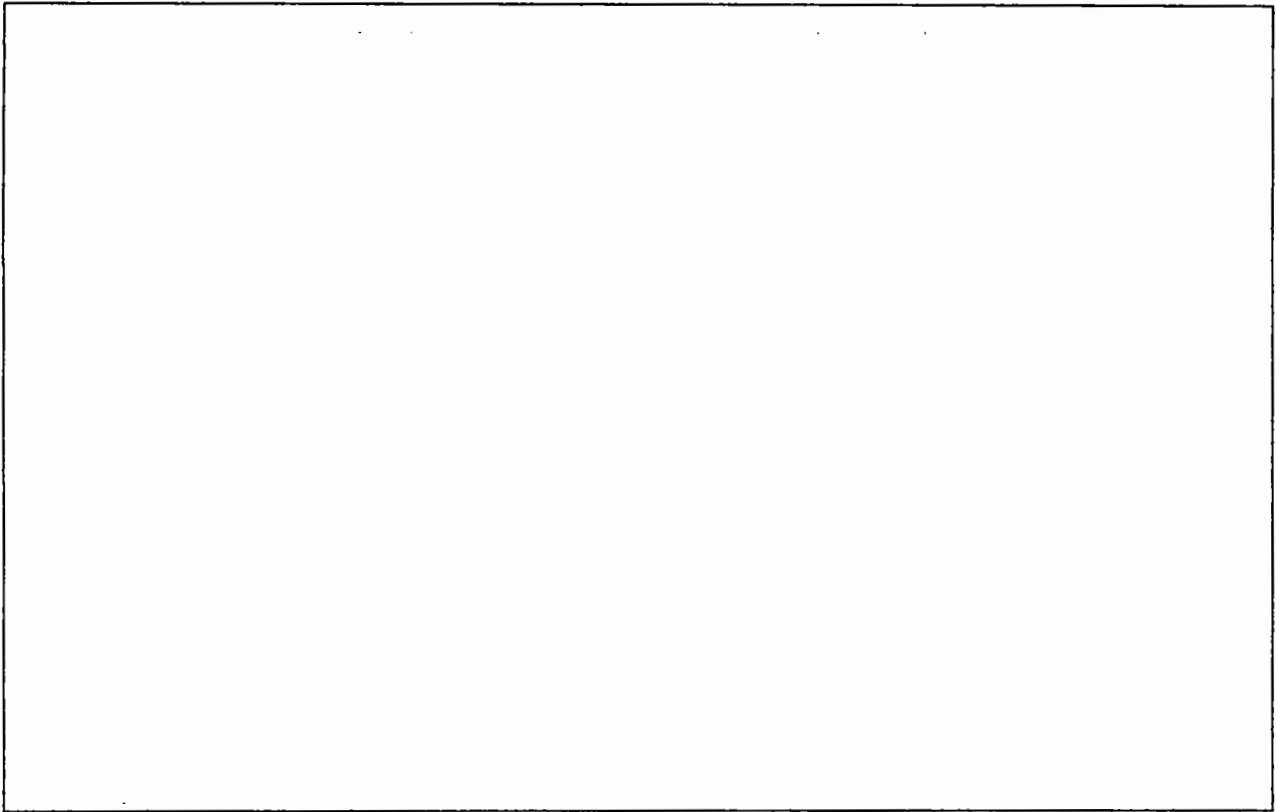
**EPA Region 6 Regional Haze
BART Cost Analysis**

**Work Assignment 4-85
(RTI 085)**

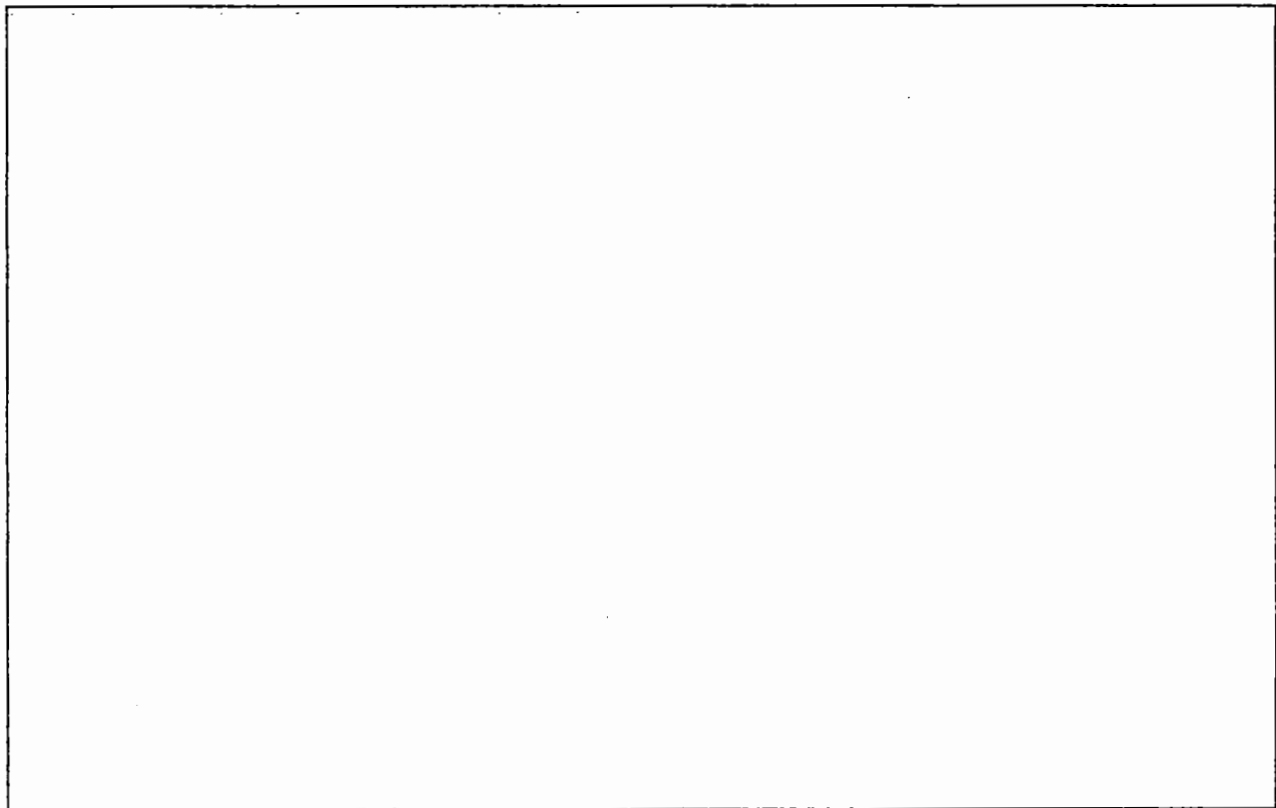
Work Plan

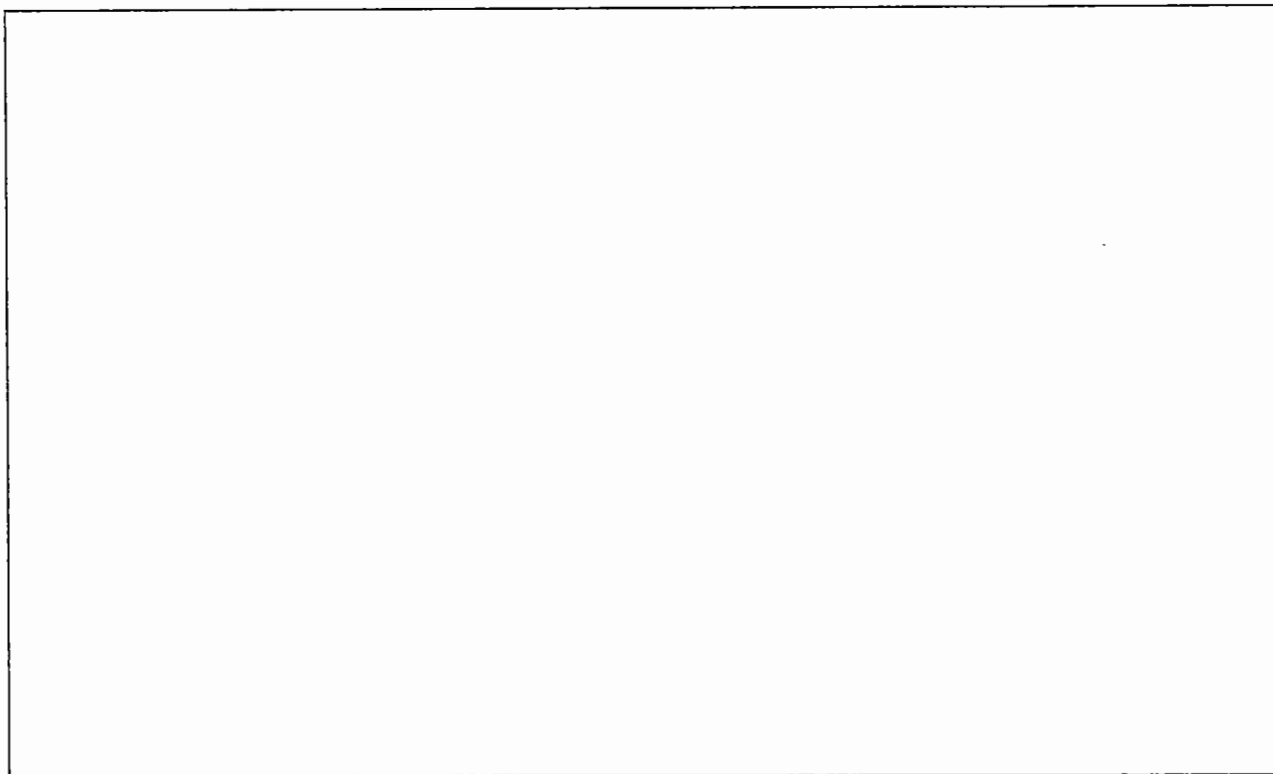
1. BACKGROUND

Task 2. Oklahoma BART DFGD Cost Estimate

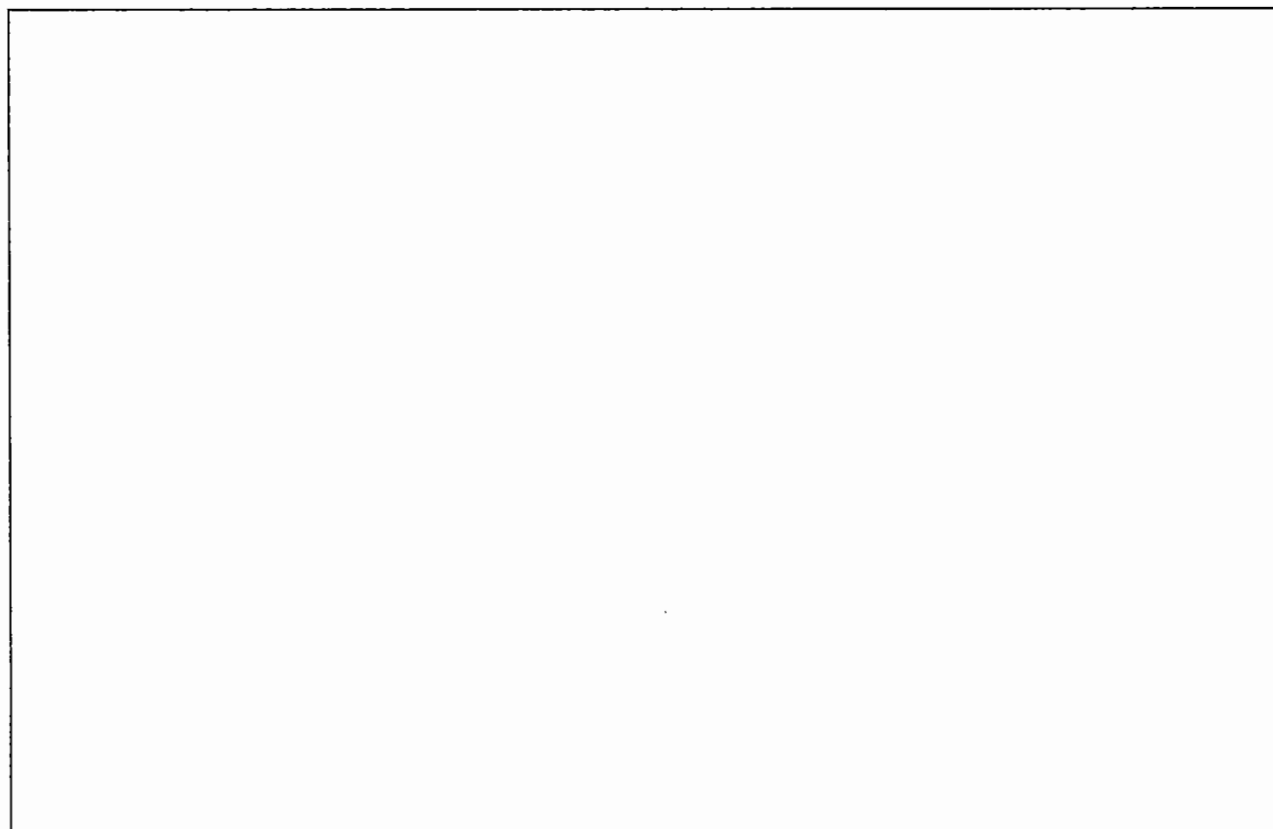


Task 3. New Mexico BART SCR Cost Estimate





3. REPORTING REQUIREMENTS



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6. STAFF AND ESTIMATED HOURS

Table 2. Staffing Plan by Task and Labor Category

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7. COST ESTIMATE

8. CUMULATIVE ESTIMATED COSTS AND LABOR-HOURS



3040 Cornwallis Road • PO Box 12194 • Research Triangle Park, NC 27709-2194 • USA
Telephone 919.541.6000 • Fax 919.541.5985 • www.rti.org

May 1, 2015

US EPA
RTP Procurement Operations Division
Mail Code: E105-02
Research Triangle Park, NC 27711

ATTENTION: Rodney-Daryl Jones
Contracting Officer

REFERENCE: Contract No. EP-W-11-029; Work Assignment No. 4-09

Dear Mr. Jones:

Enclosed please find RTI's cost estimate and work plan prepared in response to Work Assignment 4-09 under the above referenced contract.

Please note our [redacted] has made a conflict of interest disclosure under separate cover. [redacted] does not believe a conflict of interest exists, however, they are providing the disclosure for EPA's consideration.

Should you need any additional information, please do not hesitate to contact the undersigned at [redacted] or via electronic mail at [redacted]. Matters of a technical nature can be addressed to Mr. Brooks Depro at (919) 541-6729 or via electronic mail at [redacted].

Sincerely,

Donna N. Cooper
Senior Contracting Officer

Enclosures: A/S

cc: JoLynn Collins
EPA Project Officer

William Newby
EPA Contract Specialist

Ellen Belk
EPA Work Assignment Manager

CERTIFICATION CONCERNING CONFLICTS OF INTEREST

EPA Contract No. EP-W-11-029

WORK ASSIGNMENT NO: 4-09

CONTRACTOR: RTI

1. ORGANIZATIONAL CONFLICTS OF INTEREST:

To the best of your knowledge and belief, no actual or potential organizational conflicts of interest exist.

Signature:

Donna Cooper

Date:

04-28-15

OR

To the best of your knowledge and belief, all actual or potential organizational conflicts of interest have been reported to the EPA Contracting Officer. Please attach a letter detailing the Conflicts of Interest.

Signature:

Date:

2. PERSONNEL CONFLICTS OF INTEREST:

This is to certify that personnel who perform work under the work assignment or relating to the work assignment have been informed of their obligation to report personal and organizational conflicts of interests to you. Attach a letter detailing any personnel conflicts of interest, if applicable.

Signature:

Donna Cooper

Date:

04-28-15

3. FUTURE CONFLICTS OF INTEREST:

This is to certify that you will promptly report to EPA any organizational or personnel conflicts of interest that may arise during the performance of this work assignment.

Signature:

Donna Cooper

Date:

04-28-15

CBI

CERTIFICATION CONCERNING CONFLICTS OF INTEREST

EPA Contract No. EP-W-11-029

WORK ASSIGNMENT NO: 4-09

CONSULTANT/PEER REVIEWER

--

CBI

CERTIFICATION CONCERNING CONFLICTS OF INTEREST

EPA Contract No. EP-W-11-029

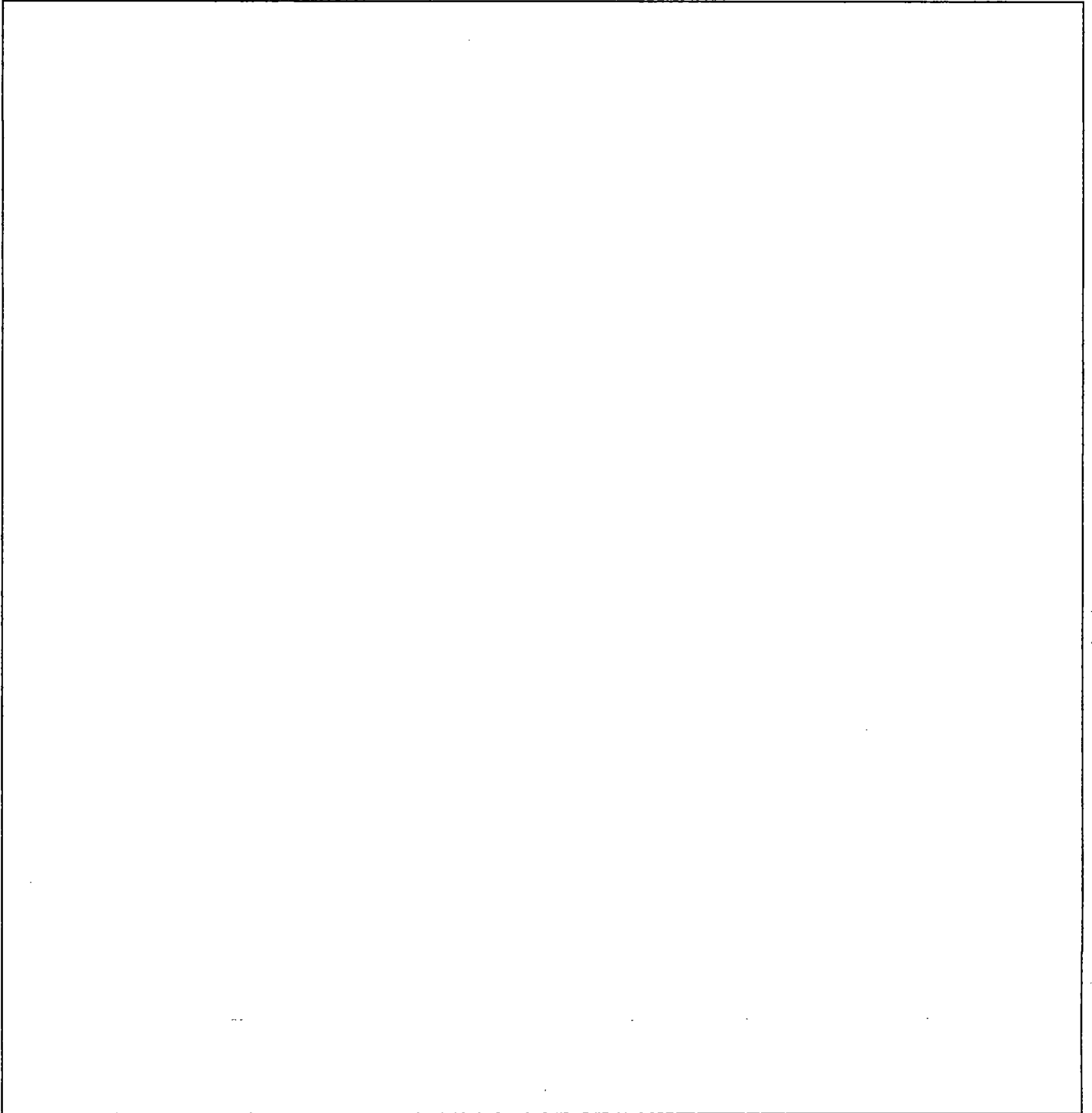
WORK ASSIGNMENT NO: 4-09

SUBCONTRACTOR:

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Work Plan

Texas Regional Haze Evaluation



Texas Regional Haze Evaluation

Contract No. EP-W-11-029

Option Period 4

Work Assignment No. 4-09

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VI. Budget and Labor Hours

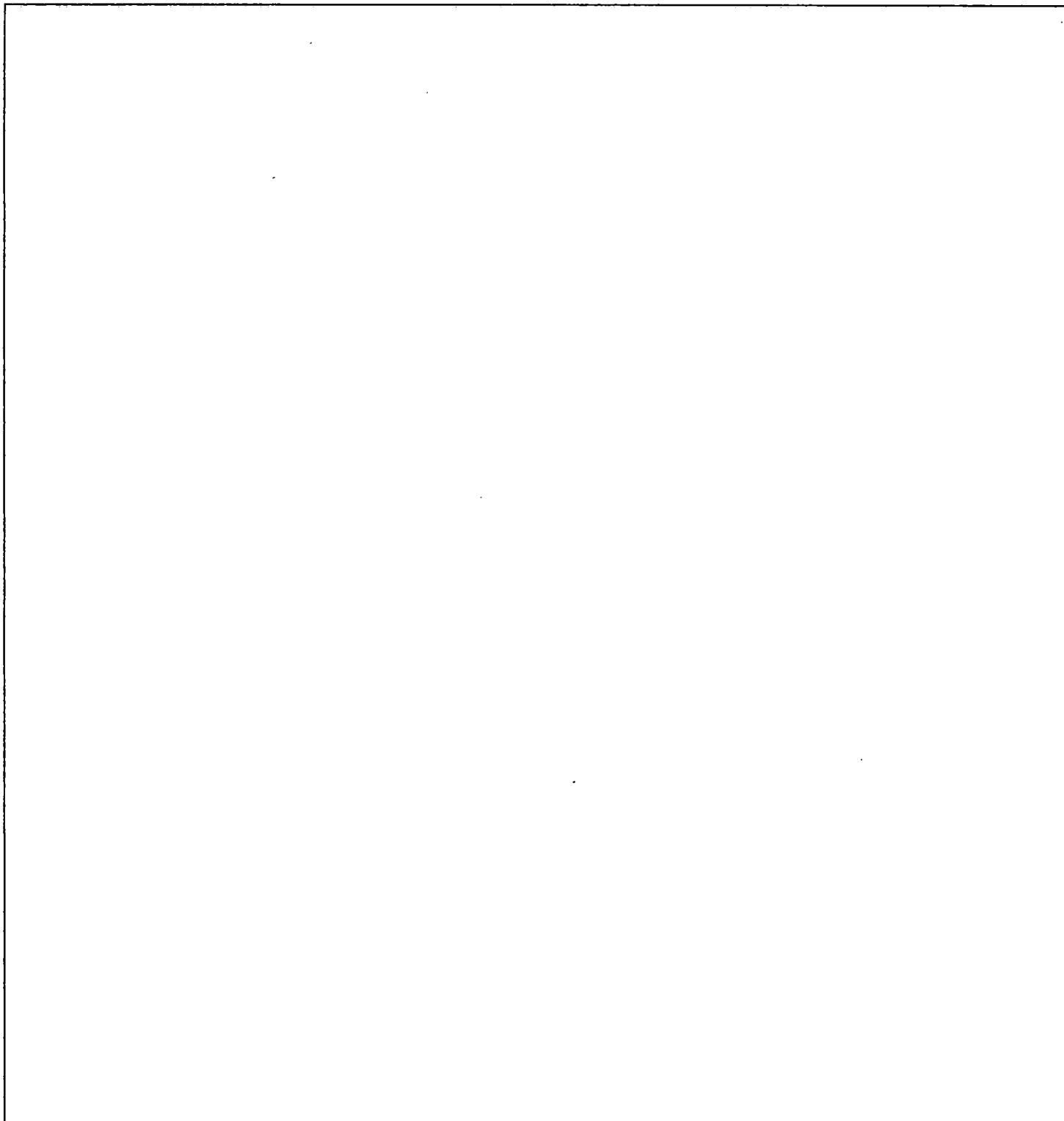


Figure 2. Cumulative Dollars



3040 Cornwallis Road • PO Box 12194 • Research Triangle Park, NC 27709-2194 • USA
Telephone 919.541.6000 • Fax 919.541.5985 • www.rti.org

November 17, 2010

US EPA
RTP Procurement Operations Division
Mail Code: E105-02
Research Triangle Park, NC 27711

ATTENTION: Karen Watson
Contract Specialist

REFERENCE: Contract No. EP-D-06-003; Work Assignment No. 4-90

Dear Ms. Watson:

Enclosed please find RTI's cost estimate and work plan prepared in response to Work Assignment 4-90 entitled, "Region 8 North Dakota Regional Haze FIP."

Should you need any additional information, please do not hesitate to contact the undersigned at [redacted] or via electronic mail at [redacted]. Matters of a technical nature can be addressed to Mr. George Van Houtven at (919) 541-7150 or via electronic mail at [redacted].

Sincerely,

Donna N. Cooper
Senior Contract Specialist

Enclosures: A/S

cc: Jolynn Collins
EPA Project Officer

Carl Daly
EPA Work Assignment Manager

CERTIFICATION CONCERNING CONFLICTS OF INTEREST

**EPA Contract No. EP-D-06-003
"Economic Analyses and Control Strategy Development
for Air Pollution Control Regulations"**

WORK ASSIGNMENT NO: 4-90

CONTRACTOR: RTI

ORGANIZATIONAL CONFLICTS OF INTEREST:

To the best of your knowledge and belief, no actual or potential organizational conflicts of interest exist.

Signature:

Date:

Donna Cogen

11/17/10

OR

To the best of your knowledge and belief, all actual or potential organizational conflicts of interest have been reported to the EPA Contracting Officer. Please attach a letter detailing the Conflicts of Interest.

Signature:

Date:

PERSONNEL CONFLICTS OF INTEREST:

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Signature:

Date:

Donna Cogen

11/17/10

FUTURE CONFLICTS OF INTEREST:

This is to certify that you will promptly report to EPA any organizational or personnel conflicts of interest that may arise during the performance of this task order.

Signature:

Date:

Donna Cogen

11/17/10

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Region 8 North Dakota Regional Haze FIP

Work Assignment 4-90 (RTI 4-90)

Work Plan

1. BACKGROUND

6. STAFF AND ESTIMATED HOURS

TABLE 2. STAFFING PLAN BY TASK AND LABOR CATEGORY									
Task	Labor Category				Total	Total	Total	Total	Total
	Category 1	Category 2	Category 3	Category 4					
Task 1	1	2	3	4	10	10	10	10	10
Task 2	2	3	4	5	14	14	14	14	14
Task 3	3	4	5	6	18	18	18	18	18
Task 4	4	5	6	7	22	22	22	22	22
Task 5	5	6	7	8	26	26	26	26	26
Task 6	6	7	8	9	30	30	30	30	30
Task 7	7	8	9	10	34	34	34	34	34
Task 8	8	9	10	11	38	38	38	38	38
Task 9	9	10	11	12	42	42	42	42	42
Task 10	10	11	12	13	46	46	46	46	46
Task 11	11	12	13	14	50	50	50	50	50
Task 12	12	13	14	15	54	54	54	54	54
Task 13	13	14	15	16	58	58	58	58	58
Task 14	14	15	16	17	62	62	62	62	62
Task 15	15	16	17	18	66	66	66	66	66
Task 16	16	17	18	19	70	70	70	70	70
Task 17	17	18	19	20	74	74	74	74	74
Task 18	18	19	20	21	78	78	78	78	78
Task 19	19	20	21	22	82	82	82	82	82
Task 20	20	21	22	23	86	86	86	86	86
Task 21	21	22	23	24	90	90	90	90	90
Task 22	22	23	24	25	94	94	94	94	94
Task 23	23	24	25	26	98	98	98	98	98
Task 24	24	25	26	27	102	102	102	102	102
Task 25	25	26	27	28	106	106	106	106	106
Task 26	26	27	28	29	110	110	110	110	110
Task 27	27	28	29	30	114	114	114	114	114
Task 28	28	29	30	31	118	118	118	118	118
Task 29	29	30	31	32	122	122	122	122	122
Task 30	30	31	32	33	126	126	126	126	126
Task 31	31	32	33	34	130	130	130	130	130
Task 32	32	33	34	35	134	134	134	134	134
Task 33	33	34	35	36	138	138	138	138	138
Task 34	34	35	36	37	142	142	142	142	142
Task 35	35	36	37	38	146	146	146	146	146
Task 36	36	37	38	39	150	150	150	150	150
Task 37	37	38	39	40	154	154	154	154	154
Task 38	38	39	40	41	158	158	158	158	158
Task 39	39	40	41	42	162	162	162	162	162
Task 40	40	41	42	43	166	166	166	166	166
Task 41	41	42	43	44	170	170	170	170	170
Task 42	42	43	44	45	174	174	174	174	174
Task 43	43	44	45	46	178	178	178	178	178
Task 44	44	45	46	47					

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8. CUMULATIVE ESTIMATED COSTS AND LABOR-HOURS

I. **Title:** Texas Regional Haze Evaluation
 Contractor Name: RTI International
 Contract #: EP-W-11-029
 WA #: 4-09

II. **Work Assignment Manager (WAM)**
 WAM Name: Ellen H. Belk
 U.S. Environmental Protection Agency
 Office: EPA Region 6, Multi-Media Planning and Permitting Division
 Division (Mail Code): 6PD-L
 City, State, Zip Code: Dallas, TX 75202-2733
 Phone: (area code) phone-number: 214-665-2164
 Email: belk.ellen@epa.gov

III. Background

EPA R6 is presently under a court-ordered Consent Decree deadline regarding action on the Texas Regional Haze (RH) State Implementation Plan (SIP). The EPA must sign a proposal Federal Register action no later than November 26, 2014, and sign a final Federal Register action no later than September 4, 2015.

This Work Assignment concerns control strategy analyses and related support for potential air pollution controls that may be required to adequately address federal regional haze requirements as part of the Texas Regional Haze State Implementation Plan. These analyses include the following components: a) strategy development, b) emission changes, c) environmental quality changes, and d) cost impacts.

IV. Description and Tasks

Task 1: Work Plan

No new workplan is required. The Contractor will use the existing workplan developed by the Contractor under the previous period of performance.

The Contractor shall develop a revised cost estimate, including a breakdown of costs for each task and subtask in the cost estimate.

The Contractor shall hold conference calls with the WAM on a regular basis after approval of the work plan to plan and review progress of this WA.

Deliverables under Task 1

The revised Cost Estimate shall be delivered to the WAM as soon as possible but no later than 20 days following the effective date of the WA.

Task 2: Control Strategy Analyses: including Modeling Support

Purpose: Regional haze (RH) sensitivity modeling to evaluate potential impact of sources and potential emission reductions from sources on RH projections.

The results of this task will be reviewed and considered by EPA R6 as part of EPA R6's review and evaluation of the Texas RH State Implementation Plan (SIP).

Background: From approximately 2002 through 2007, the Central Regional Air Planning Association (CENRAP), hired contractors including the Environ Corp., in developing a very detailed photochemical modeling analysis for use by states in responding to requirements of the Clean Air Act. This modeling has been used by CENRAP states in developing their Regional Haze SIPs. The work required under this Work Assignment will build directly off of the above mentioned earlier CENRAP work, and will build on CENRAP's modeling files and post-analysis work.

Description: The Contractor shall utilize these modeling databases generated for CENRAP members to conduct photochemical modeling using PSAT source apportionment and Plume-In-Grid to identify impacts from selected sources or groups of sources identified by EPA Region 6. This entails using CAMx (latest version) and the CENRAP RH modeling files (2002 and 2018) that Environ Corp. has currently archived. In order to complete this work these several Terabytes of modeling data will need to be utilized and it is anticipated that some modifications and updating of emissions, including evaluating and deciding how to incorporate the reductions assumed under the Cross State Air Pollution Rule (CSAPR) and the Mercury and Air Toxics Standards (MATS), are most likely necessary to complete this work. This work is being conducted to help EPA R6 review and evaluate the Texas Regional Haze SIP. As required by Consent Decree, EPAR6 is concurrently developing a proposed action regarding the Texas Regional Haze SIP.

General Requirements: The Contractor shall provide EPA R6 with files and interim files periodically and also as requested, throughout the duration of this Work Assignment. This information will be used by EPA R6 for review and consideration of decisions on targeting sources for source apportionment modeling and potential emission reductions.

Schedule: This work shall be completed as soon as possible.

This work consists of the following sub-tasks:

TASK 2: Subtask 1: Preparing to conduct CAMx Source Apportionment:
Retrieving modeling files and updating emission files for a current analysis (2002 and 2018).

For this Subtask, the Contractor shall:

a) Retrieve the CENRAP modeling files for CAMx runs including emission files and processing files (F and G EI versions)¹. Environ Corp. currently has these files archived on back-up drives from their previous contracting work for CENRAP. Environ conducted much of the original regional haze modeling for CENRAP and other RH modeling for other RPOs.

b) Using the older CAMx ready files ('F' EI versions) that can be used for source apportionment and that still have facility location specific information, update the files (Typ02F and Base18F) to reflect the final changes incorporated in the final CENRAP modeling CMAQ runs: 2002 base case (Typ02G) and 2018 base case (Base18G) emission inventories. (In the final updates some of the source specific information was replaced with NEI data that moved sources to the center of the county, we are outlining that we need files that have the final CMAQ inventory and the location specific information).

Deliverable: Upon completion, the Contractor shall provide the following to EPA R6: a memorandum documenting changes to the EI and the procedures used to make the updates to the EI.

The Contractor shall obtain approval for this deliverable from EPA R6 prior to proceeding with the next step. It is expected that EPA will be able to approve the Contractor's memorandum within 3 business days of receipt.

c) Compare 2002 and 2018 final CENRAP inventories for EGUs with EGU inventories for the CSAPR and MATS 2011 rules (2005/2014 CSAPR and 2005/2016 MATS). Provide the following:

- i. Spreadsheets with EGU facility specific comparisons (unit based if available and not difficult – discuss with EPA).
- ii. Spatial plots of differences between EI and spatial plots of each EI timeframe (base and future years). The expectation is that while the years differ, the EGU inventories should be similar but must be compared before deciding on an EGU EI update strategy. Source specific information must be provided where possible for decision making on how to perform updates to the EI for EGUs.
- iii. A memorandum documenting proposed changes to EI and the procedures used to make the updates to the EI would be provided for the 2.c. task.

Deliverable: Upon completion, the Contractor shall provide the following to EPA R6: a memorandum documenting the proposed changes to the EI and the procedures used to make the updates to the EI.

The Contractor shall obtain approval for this deliverable from EPA R6 prior to proceeding with the next step. It is expected that EPA will be able to approve the Contractor's memorandum within 5 business days of receipt.

d) Based on input from EPA Region 6, update 2002 and 2018 EGU files as directed.

¹ Note: These are not the final Emission Inventory files used in the CMAQ modeling conducted for CENRAP states.

- e) Modify emission inputs for Oil and Gas in North Texas area, based on recent modeling files available from TCEQ. EPA will provide an appropriate TCEQ contact.
- f) Update Speciation profiles for CB-V.

Deliverable: Upon completion of Subtask 1.e and 1.f, the Contractor shall provide the following to EPA R6: a memorandum documenting the changes to the EI and the procedures used to make the updates to the EI.

TASK 2: Subtask 2. Conducting CAMx PSAT Source Apportionment Modeling.

For this Subtask, the Contractor shall:

Conduct 2002 and 2018 modeling with Plume-In-Grid and a 12 km flexi -nest grid that covers the area of the Class I areas (Eastern NM to Breton area and OK-KS border to Mexico border at southern tip of Texas).

For each of the 2002 and 2018 modeling runs that will be conducted, the Contractor shall provide the following to EPA R6: the associated post-processing conducted to generate information to evaluate RH projections and impacts from emission reductions at source identified. It is expected that this will include deliverables of initial modeling evaluations followed with modeling summary information provided as memos with associated data.

- a) Run revised 2002 emission inventories and generate new base case RH modeling. EPA is interested in doing projections of visibility at a number of Class I areas impacted by Texas, including Wichita Mountains, Caney Creek, Upper Buffalo, Breton Island, Big Bend, Guadalupe Mountains, Carlsbad, Salt Creek Wilderness, and White Mountain. Final list will be shared during project and prior to start of Subtask 2.

Deliverable: Upon completion, the Contractor shall provide the following to EPA R6: the modeling summary information in the form of memo and summary data. This information will be used by EPA R6 for review and comparison with previous CENRAP final modeling base projections.

The Contractor shall obtain approval for this deliverable from EPA R6 prior to proceeding with the next step. It is expected that EPA R6 will be able to approve the Contractor's memorandum within 5 business days of receipt.

- b) Conduct PSAT sensitivity runs on 2018, for sources/groups of sources based on a list provided by EPA Region 6. It is anticipated that EPA R6 will be able to provide this list within 5 business days of completion of the subtask 1. Sources with reductions will be a combination of elevated point sources and some lower level sources. Envision 3-5 future year model runs: 1 No additional controls. 2 & 3. High and low level controls on EGU and non-EGUs that EPA identifies, and runs 4, 5, 6 will be outlined later if we determine more sensitivity runs or a final scenario run are needed.

Deliverable: Upon completion, the Contractor shall provide the following to EPA R6: modeling summary information in the form of a memo and Future year visibility impairment projections at each Class I area, PSAT data and summary data. This information will be used by EPA R6 for review and comparison with previous CENRAP final modeling base and future projections (memo would expand on documentation for Subtask 2.b).

The Contractor shall obtain approval for this deliverable from EPA R6 prior to proceeding with the next step. It is expected that EPA R6 will be able to approve the Contractor's memorandum within 5 business days of receipt.

TASK 2: Subtask 3. Report

Deliverables: Based on the information developed in Subtask 1 and 2 above, the Contractor shall provide the following to EPA R6, for each of the 2002 and 2018 cases:

- a) DRAFT Report, including memorandums from subtasks as well as any additional documentation of process, changes to EI, etc.
- b) Model run input, outputs, control files, visibility post-processing software, etc. (as electronic deliverables).

Upon receipt of draft versions of these deliverables, the EPA R6 WAM will provide comments within 10 business days.

The Contractor shall provide final work products, including a final version of the Report, within 10 business days following receipt of WAM comments.

TASK 3: Subtask 4: Comment Response Support

The Contractor shall not proceed with this subtask until directed through written technical direction by the EPA R6 WAM.

The Contractor shall provide technical support, as needed, to address approximately 3,000 – 5,000 public comments that are received on EPA's TX RH proposal, concerning Task 2, subtasks 1-3. EPA Region 6 will provide the Contractor with a copy of the comments in either Microsoft Word or Adobe pdf format, and the Contractor will provide a draft referenced response in Microsoft Word format.

Deliverable: The Contractor shall provide EPA R6 with a record of this work, including a description of the technical support provided; hours may be grouped together on like undertakings. This record shall be provided on a monthly basis, within 15 days following the end of each month.

Task 3: Control Cost and Performance Capability Support

Purpose: To support EPA Region 6 in assessing pollution control costs and the performance capability of those controls and in responding to public comments.

The results of this task will be reviewed and considered by EPA R6 as part of EPA R6's review and evaluation of the Texas RH State Implementation Plan (SIP).

Background: Task 2 is designed to evaluate the visibility impact of sources and the benefit of potential emission reductions from those sources on RH projections. Task 3 is designed to assess the costs and the performance level of any controls that could be installed on the sources identified from Task 2. It is envisioned that this task will primarily be concerned with the evaluation of SO₂ controls on coal fired EGUs, but a small number of other sources may also have to be evaluated for NO_x and/or SO₂. Because of time constraints, part of Task 3 must begin prior to the completion of Task 2, and it is anticipated that all of Task 3 will be completed at a time similar to the completion of Task 2. This timing necessitates that the control cost and performance evaluation be performed on a broad group of sources that may significantly impact visibility.

To conduct this work, a proven national expert-level knowledge of stationary source pollution control costing and performance evaluation as applied to the regional haze program is required. It is anticipated that the contractor may need a subcontract in order to provide the needed expertise.

Description: EPA R6 will provide the Contractor a listing of potential significant sources of visibility impairing pollutants, including coal fired EGUs and potentially other large stationary sources. The Contractor shall provide support in the development of control costs and the performance capability of pollution control equipment for these sources, using the methodology described in EPA's Pollution Control Cost Manual.² This work will entail the identification of information and resources for costing controls, the potential development or modification of spreadsheet control cost models, and the assessment of the performance potential of the costed controls. The Contractor is expected to provide support to the EPA Region 6 staff in the development of an EPA report. The Contractor is also expected to provide support to EPA Region 6 in responding to comments received in response to EPA Region 6's proposed action on the Texas Regional haze SIP.

General Requirements. The Contractor shall provide EPA R6 with a record of this work, including a description of the technical support provided; hours may be grouped together on like undertakings. This record shall be provided on a monthly basis, within 15 days following the end of each month.

Schedule. Because of time constraints, it is planned that Task 3 will proceed concurrently with Task 2, necessitating that the control cost and performance evaluation be performed on a broad group of sources. This work shall be completed as soon as possible with the assessment of the performance potential of controls to be completed

² http://www.epa.gov/ttn/catc/dir1/c_allchs.pdf

first (as it is an input to Task 2), followed by the pollution control cost evaluation. This work shall be completed as follows:

- Subtask 1 Within 4 weeks of the start of this subtask
- Subtask 2 Within 12 weeks of the start of this subtask
- Subtask 3 Within 4 weeks of the start of this subtask
- Subtask 4 Within 3 weeks of the start of this subtask
- Subtask 5 Within 12 weeks of the start of this subtask.

This work consists of the following sub-tasks:

TASK 3: Subtask 1: Assessment of the Cost and Performance Potential of EGU SO₂ Retrofit Controls

For this Subtask, the Contractor's duties shall consist of the following:

The Contractor will be provided with spreadsheet of cost analyses for SO₂ scrubber and Dry Sorbent Injection (DSI) retrofits for potentially significant sources of visibility impairing coal fired EGUs. This will include a unit-by-unit accounting of the latest SO₂ and NO_x emissions and heat rate information, existing pollution controls, fuel type where available, location by latitude and longitude, and other pertinent information.

The Contractor shall check the information for accuracy and technical appropriateness, considering the task at hand. This shall include an assessment of the minimum achievable SO₂ emission limit that could result from the installation of scrubbers. This shall include an assessment of all parameters and assumptions. The Contractor shall provide appropriate documentation to support that assessment, which shall include manifestly defensible SO₂ emissions based on the best controlled of similar sources, for the particular control and fuel type.

Deliverable: The Contractor shall provide EPA R6 with a record of this work, including a description of the technical support provided; hours may be grouped together on like undertakings. This record shall be provided on a monthly basis, within 15 days following the end of each month.

TASK 3: Subtask 2: Assessment of the Costs and Performance of EGU Scrubber Upgrades

The Contractor shall not proceed with this subtask until directed through written technical direction by the EPA R6 WAM.

The Contractor shall assess existing resources (e.g., literature search, existing control cost models, any information supplied by EPA, etc.) for a methodology for costing scrubber upgrades and calculating the performance resulting from those upgrades. This analysis may be categorized into levels of increasing performance and cost. It is anticipated that this may involve approximately one dozen units as selected by EPA. This control cost

analysis is not expected to approach the specificity of EPA's Oklahoma and New Mexico FIPs. Rather, the Contractor will provide support in developing costing information that is based on the existing costs of similar controls from existing sources. All costing must follow EPA's Pollution Control Cost Manual. Discussions with pollution control vendors and the solicitation of quotes or other supporting material may be necessary in specific cases. For each unit assessed under Task 3, subtask 1, above, the Contractor shall provide support to EPA Region 6 in developing the capital cost, the annualized cost, the emission limit, and the cost effectiveness in terms of \$/ton of pollutant removed. This analysis shall be in spreadsheet form.

Deliverable: The Contractor shall provide EPA R6 with a record of this work, including a description of the technical support provided; hours may be grouped together on like undertakings. This record shall be provided on a monthly basis, within 15 days following the end of each month.

TASK 3: Subtask 3: Comment Response Support

The Contractor shall not proceed with this subtask until directed through written technical direction by the EPA R6 WAM.

The Contractor shall provide technical support, as needed, to address public comments that are received on EPA's TX RH proposal, concerning Task 3, subtasks 1 and 2. EPA Region 6 will provide the Contractor with a copy of the comments in either Microsoft Word or Adobe pdf format, and the Contractor will provide a draft referenced response in Microsoft Word format.

Deliverable: The Contractor shall provide EPA R6 with a record of this work, including a description of the technical support provided; hours may be grouped together on like undertakings. This record shall be provided on a monthly basis, within 15 days following the end of each month.

TASK 3: Subtask 4: General Control Cost and Performance Capability Support

The Contractor shall not proceed with this subtask until directed through written technical direction by the EPA R6 WAM.

The Contractor shall provide general technical support on control cost and performance capability, as needed, as directed by EPA.

Deliverable: The Contractor shall provide EPA R6 with a record of this work, including a description of the technical support provided; hours may be grouped together on like undertakings. This record shall be provided on a monthly basis, within 15 days following the end of each month.

TASK 3: Subtask 5: Assessment of the Costs and Performance of EGU Scrubber Upgrades Using Claimed Confidential Business Information (CBI)

The Contractor shall not proceed with this subtask until directed through written technical direction by the EPA R6 WAM.

The Contractor shall consider claimed Confidential Business Information (CBI) in relation to a methodology for costing scrubber upgrades and calculating the performance resulting from those upgrades. The Contractor shall use claimed CBI to provide support in developing costing information that is based on the existing costs of similar controls from existing sources. All costing must follow EPA's Pollution Control Cost Manual.

Deliverable: The Contractor shall provide EPA R6 with a record of this work, including a description of the technical support provided; hours may be grouped together on like undertakings. This record shall be provided on a monthly basis, within 15 days following the end of each month.

TASK 4: Comment Response Support

The Contractor shall not proceed with this task until directed through written technical direction by the EPA R6 WAM.

The Contractor shall not proceed with any subtasks until directed through written technical direction by the EPA R6 WAM.

The Contractor shall provide support to address public comments that are received on EPA's TX RH regulatory proposal.

For public comments received by EP in response to the regulatory proposal, the contractor shall perform the following:

- Subtask 1: Review, index, organize
- Subtask 2: Summarize
- Subtask 3: Provide technical support in the development of draft responses
- Subtask 4: Provide technical analysis as needed to develop such responses
- Subtask 5: Provide modeling analysis as needed to develop such responses.

Deliverable: The Contractor shall provide EPA R6 with a record of this work, including a description of the technical support provided; hours may be grouped together on like undertakings. This record shall be provided on a monthly basis, within 15 days following the end of each month.



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June 22, 2010

US EPA
RTP Procurement Operations Division
Attn: Cooper E105-02
Research Triangle Park, NC 27711

ATTENTION: Karen Watson
Contract Specialist

REFERENCE: Contract No. EP-D-06-003; Work Assignment 4-85

Dear Ms. Watson:

RTI would like to request an extension to Thursday, July 1st for submission of the work plan and cost estimate in support of Work Assignment 4-85. Upon review of the SOW requirements for this work assignment, we have determined that RTI

Should you have any questions, please do not hesitate to contact me at or via electronic mail.

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Sincerely,

Donna N. Cooper
Senior Contract Specialist